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Emmett H. Schroeder
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★ OCT 28 1949 ★

U. S. Department of Agriculture

GRAPES

From

The Schroeder Vineyard

800 West 17th St.

Hutchinson, Kansas

STURDY ONE YEAR VINES
AND CUTTINGS

From

The Largest Private Collection

in the

United States

A FEW FACTS ABOUT THE FRENCH HYBRIDS

All grape growers are familiar with the fungus diseases which attack our native varieties and many of them with phylloxera, a very tiny plant louse which does most of its damage on the roots of the vine. Few know that these diseases and phylloxera were unknown in the vineyards of the Old World until after the middle of the last century. Introduced on cuttings of our native species, they swept over the Continent like a devouring flame, in a few years reducing the harvest to less than one-fourth of its previous level. The main industry of France at stake, every man connected with it sought for the answer. The very vines that introduced the plague provided the only solution. By grafting their traditional varieties to stocks of American species, the phylloxera was subdued. And it was found that the salts of copper and sulphur were the answer to the fungus diseases. Yet grafting is at best an uncertain operation, the question of affinity between stock and scion sometimes baffling, and the expense of planting greatly increased. So many workers began the long work of creating new vines, hybrids between the traditional vinifera varieties and various American species, hoping to have the quality and production of the vinifera combined with the disease resistance and hardiness of the American species. That was nearly 80 years ago and today, after endless crossing and re-crossing, that goal is nearly attained. The perfect vine will never be found, for one that may be perfect in one location may be unsuitable elsewhere, weather conditions and soils being what they are. Then too, the use for which the fruit is gathered may affect its rating--the finest table variety does not make the best wine--or juice--or jelly.

The main point of difference between our American hybrids and those of the French workers is in the use of the species *Vitis Labrusca* (Of which Concord is an almost pure example). Our American breeders used this species because it has the largest berries and showiest cluster of all our native grapes--but it also has a rank flavor, refreshing enough in the fresh fruit to those accustomed to eating it, but distasteful to palates accustomed to the neutral vinifera. And when made into wine this "foxy" flavor is overpowering. Altho some of the early hybrids contained a small percentage of this tainted blood, the French hybridizers soon found that if they wished to produce varieties capable of producing excellent wines, they must turn to other species. Consequently, the outstanding varieties of today contain no *Labrusca*, the species represented being *Rupestris*, *Berlandieri*, *Lincecumii*, *Aestivalis*, *Riparia*, and the cultigen *Bourquiniana*.

The Seyve-Villard 12-375 may serve to illustrate the complex parentage of present day hybrids. Of a total of 64 parts, 39 are vinifera, 16 *Rupestris*, 4 *Berlandieri*, 3 *Lincecumii*, and 1 *Bourquiniana*. When one finds that the *Bourquiniana* is supposed by the French to be a *Vinifera* X *Aestivalis*--*Cinerea* hybrid, it appears that nearly all suitable American species are represented. Others are not as complex--the Seibel 11803 is nearly so and others may contain the blood of only three or four species.

What has been accomplished by all this? One has only to grow a few vines to find the answer for himself, but briefly it is the superior quality of the fruit, better disease resistance and increased production. Table varieties superior to the California market shippers may be grown in your own yard, delectable juice and wine varieties by your doorstep. And with a minimum of care, if certain essentials are observed.



SEIBEL 6905

Everyone has heard that old saw about "the tail waggin' the dog". We started to grow grapes as a hobby, but by the fall of '46, we found ourselves attached to a very active tail! We had discovered, through Philip M. Wagner's admirable "A Wine-Grower's Guide", the existence of the French-American hybrids.

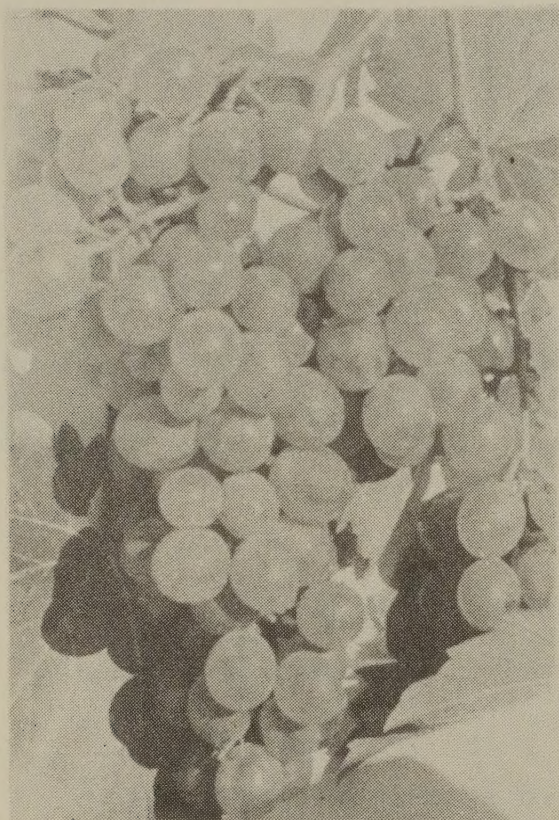
Altho known to some extent in this country prior to the last war, many of the better varieties had never been imported. Here was better than 70 years work on the most important fruit in the world, and practically unknown in the very area its results might be expected to benefit. Obviously the thing to do was give these new varieties a thorough trial. Overcoming (?) the difficulties of the French language, we corresponded with each prominent French hybridizer and finally arranged (with a nice garnish of red tape) for importations in '47, '48, and '49. Unfortunately our government instituted an embargo against the importation of this material from Europe effective Jan. 1, 1949 and several shipments, containing over 200 varieties, were held up. Luckily, we were able to have the USDA grow these in quarantine for us and we will ultimately be supplied with propagating material of each variety--we hope.

Investigation also showed much work along the same lines by the Experiment Stations of New York, Missouri, and others. While some fine varieties have been released by these stations, most are still under trial. The USDA is also active in the same field. It is gratifying to note that many other states are beginning extensive work with this fruit--among them are Illinois, Virginia, New Jersey, Washington, and Oklahoma. And Texas, of course.

So we feel that that happy day is here when every man "can sit under his own vine and enjoy the fruit thereof". Among these many splendid varieties are some to fit every need and location in the eastern United States--wherever the vine may be grown.

SYMBOLS USED IN THESE DESCRIPTIONS

Season: very early ve, early e, midseason m, late l.
 Color: white, green or gold g, black or blue b, rose p, red r.
 Vigor: very vigorous vv, vigorous v, medium mv.
 Production: very high hp, good p, medium mp.
 Disease resistance: very high rl, good r2, medium r3.
 Method of pruning: long lo, short s.
 Use: table t, wine w, juice j, jelly je.



S-V. 12-309

HYBRIDS OF SEYVE-VILLARD

5-276 g e vv hp rl t w s
 Big clusters of medium berries. Up to 27% sugar. In bearing 2nd year. A fine grape. \$1 ea--10 for \$9
 12-309 p-g m vv hp rl t w s
 Superb loose clusters, very fine. 1.25 ea--10 for \$11
 12-347 b m vv p t7 w rl lo
 Med. loose bunches of large berries of good quality. \$1 each--10 for \$9
 12-375 g m vv hp rl t w lo
 Large loose clusters of fine crisp berries. Wonderful flavor. 1.25 ea--10 for \$11
 14-287 g ve mv p r2 t w s
 A delicious Muscat, ripens here in early August. Med. berries. 1.25 each.
 12-259 r-g lm v hp r2 w t7 s
 Handsome loose bunches, med. berries. 1.25 each.
 12-308 b m v hp rl t w s
 Large compact bunches, large ovoid berries. 1.25 each.
 12-327 b m v hp rl t7 w s
 Large bunches of very juicy berries. 1.25 each.

12-364 g m-l vv hp r2 t s Enormous clusters (up to 2½ lbs.) of very large pointed berries. Quality high. 1.25 each
 12-391 b m mv hp r2 t w s Magnificent bunches of large ovoid berries, crisp and delicious. Needs good soil. 1.25 each
 12-413 g m v hp r2 t w s Very large clusters of very large gold berries. Advised for hot areas. Good wine. 1.25 each
 15-403 b e mv hp rl t7 w s Long bunches above medium in size, medium berries. Good wine of light color. 1.25 each.
 15-505 g e vv hp rl t7 w s Long loose bunches, will hang on vine after ripening without rot. Berries small. 1.25 each
 23-657 b m vv hp rl t w s Long loose bunches of medium ovoid berries. Extremely high in sugar and delicious. Our only bearing vine at the moment is a graft made in '48 on Rup. St. George. It yielded over 10 lbs. this season. The berries are a beautiful sooty black with blue bloom. 1.50 each.

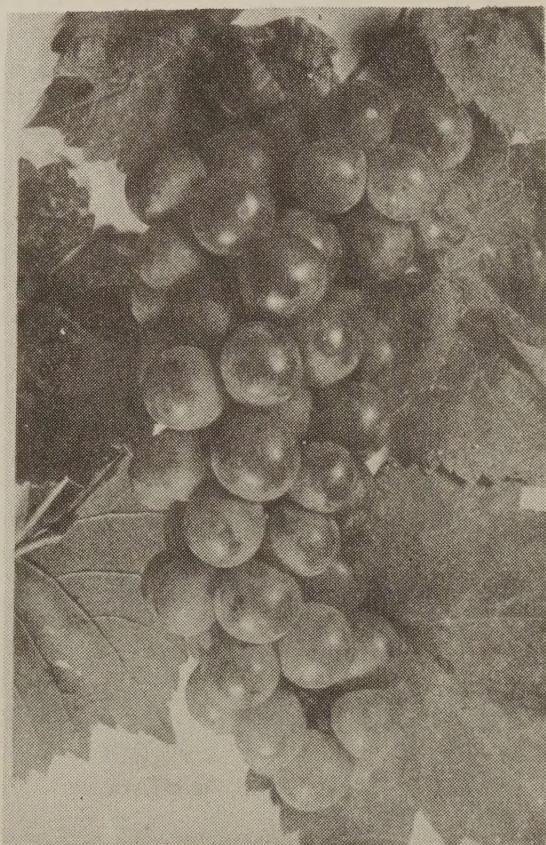
MISCELLANEOUS

BACO 1 b m vv hp rl w j lo Medium bunches, medium to small berries. Very fine wine and juice. .75 each--10 for 6.75
 BERTILLE SEYVE 2862 b m mv p rl w t lo One of the earlier varieties with a bit of Labrusca blood, but good .75 each
 BURDIN 4672 g m v hp r2 w s One of the best wine varieties of this hybridizer. 1.25 each
 RUDELIN 60 table grape--has not fruited here yet 1.25
 RAVAT 34 g m table--has fruited on a '48 graft 1.00

THE SEIBEL HYBRIDS

1 b m v p r l w l o produces a very good wine .75-10/6.75
 2 b m v v p r l w l o very good wine .75-10/6.75
 14 a wine variety not yet in bearing here .75-10/6.75
 128 another wine variety not yet bearing .75-10/6.75
 1000 b e v v p r l w l o a little subject to anthracnose but
 where conditions suit it is an excellent vine .75-10/6.75
 2056 b m v p r l w t? l o? insufficient data .75-10/6.75
 4643 b m v v h p r l w s this variety averaged 19 lbs on 5 vines
 this season, ripening evenly and of good quality .75-10/6.75
 4986 g m e v v h p r l w t? s gives every indication of being
 an excellent producer of an excellent wine .75/10-6.75
 5296 p m e v v h p r l w t l o has compact clusters of below
 medium berries, very sweet and good .75/10-6.75
 5455 b m v v p r l w s heavy producer of an excellent wine,
 but not to be grown where spring winds are strong, as the
 young shoots break easily. .75-10/6.75
 5760 no data on this variety as yet .75-10/6.75
 5860 g m v p r l w t s an excellent wine and table grape
 without spraying. .75-10/6.75
 5898 no data on this variety yet .75-10/6.75
 6339 b m e m v p r l w s a teinturier (coloring matter in the
 pulp as well as skin) an excellent wine variety 1.00
 6905 b m e m v p r l w s very fine wine. must be pruned very
 short or crop thinned. But very good. .75-10/6.75
 7053 b m e v v h p r l w s one of the best varieties for good
 ordinary red wine, remarkably vigorous and steady in its
 production. Worth trial anywhere. .75-10/6.75
 7349 b e v r 2 recommended for juice .75-10/6.75
 8357 b m v v m p r 2 w l o teinturier, the best .75-10/6.75
 8616 b m v v m p r 2 w t l o? adapted on almost all soil types,
 which should give it a place in doubtful locations. .75-10/6.75
 10096 b m v p r 2 w s bunches are very long, sometimes 18"
 in length with a heavy shoulder. Fine wine. .75-10/6.75
 10146 ? ? v h p r 2 has not borne here but is listed as hav-
 ing long bunches of medium berries, muscat flavor. .75-10/6.75
 12583 g e m o m v r l w s yields a remarkable wine. .75-10/6.75

2653 g m e v p r 2 t w s-l o?
 Loose bunch, large crisp berr-
 ies. Very fine table grape.
 Good wine. 1.25 each.
 11803 p m m v h p r l t w s
 Beautiful compact clusters of
 crisp, sweet berries. Favor-
 ite of all who taste it. A
 must. 1.25 each.
 13053 b v e v v p r l t? w s-l o?
 Medium bunch--fine wine. 1.25
 14117 b e v v h p r l t w s
 14483 b l m v p r l t w s
 14596 b e v v h p r l t w s
 14654 g e v h p r l t s
 14660 g e m v p r 2 t s
 14664 g e v p r l t s Muscat
 These 14000 varieties are among
 the latest originations of Sei-
 bel. Planted in '48, a few
 small clusters were ripened,
 enough to say that table qual-
 ity is high. 1.25 each.



NEW YORK INTRODUCTIONS

ATHENS b e v p r l t lo An early black grape of the Concord type. Well worthy of trial. .75 each--10/6.75
 BROCTON g m mv p r l t w lo? Large clusters of large berries. Sweet and richly flavored. .75 each--10/6.75
 BUFFALO b e v hp r l t w lo Clusters and berries medium. Richly flavored and quite early. .75 each--10/6.75
 GOLDEN MUSCAT g l v hp r l t lo Extremely large clusters of large ovoid berries, very delicious. It has been a heavy producer of beautiful clusters and regular. .75--10/6.75
 KEUKA r l mv p r l-2 t w lo The fruit of this variety is pure vinifera in character, delicious and sweet, with an unusual flavor and perfume. My favorite. .75--10/6.75
 SENECA g lm p r l t w? lo has not proved as satisfactory here as Golden Muscat but is a very fine grape .75--10/6.75
 RIPLEY g em v vp r l t w lo This has been an extremely productive variety. Is very promising. .75--10/6.75
 SHERIDAN b lm vv vp r l t lo Has been extremely productive here. Makes the best jam I have ever eaten .75--10/6.75
 VAN BUREN b e v hp r l t lo An extremely early grape of very good quality. Worth trial. .75--10/6.75
 WESTFIELD b m v p r l t? j w je A good variety to provide deep color for juice, jellies and wine. Its sugar content is good and color is intense. .75--10/6.75

MUNSON HYBRIDS

AMERICA b m vv p r l t w j je lo Juice of intense color. Extremely health and disease free. .75--10/6.75
 ARMALAGA g m v p r2 t w? lo? Good quality .75--10/6.75
 DELICATESSEN b em vv p r l w j lo one of the best of Munson's hybrids for wine .75--10/6.75
 EDNAG m vv p r l t lo a good grape for home use and local market. Self sterile. .75--10/6.75
 KRAUSE g m v p r l t lo very fine quality .75--10/6.75
 LADANO r e v mp r l t lo quality good .75--10/6.75
 LOMANTO b m v p r l t j je w? lo One of the Munson hybrids recommended in Canada for wine. It makes the best jelly of all, according to a correspondent .75--10/6.75
 MUENCH b l vv hp r l t j je w? lo A favorite of the Missouri station. Parent of some of their very promising new seedlings. A very good grape. .75--10/6.75
 WAPANUKA g m v p r2 t s-lo One of the best table grapes Munson produced. .75--10/6.75

MISCELLANEOUS

TRIUMPH g l v p r2 t lo The very best table variety of the older American hybrids 1.00 5--4.50
 HERBEMONT b l v p r l w lo The best wine variety for the south, in the older hybrids .75--10/6.75

HYBRIDS OF COUDERC (FRENCH-AMERICAN)

COUDERC 13 g m v hp r l w t lo? Good wine, fair table. .75
 COUDERC 4401 b e vv hp r l w j lo heavy producer of medium bunches, small berries, excellent juice, good wine .75
 COUDERC 7120 b m-l v hp r l w s heavy producer of beautiful compact clusters, 4 to 5 each shoot. .75 10 for 6.75

TERMS OF SALE

Where vines are priced in quantities of ten, 1 to 5 will take the each rate, 6 and over the ten rate. Varieties may not be combined to take the lower rate. Shipment will be made by prepaid parcel post, no charge for packing or postage. Please indicate preferred shipping date. Varieties are guaranteed true to name but our responsibility shall be limited to replacement of any stock found untrue. Remittance must accompany order in full. References on request.

SPECIAL LISTING OF VARIETIES IN SHORT SUPPLY

LANDOT	BURDIN	SEIBEL	SEYVE-VILLARD	MISSOURI
244	4503	5409	12-328	INTRODUCTIONS
304	4655	8365	12-358	
508	4678	8745	12-401	Eleven Point
1674	4716	10076	14-287	Piney
2281	5201	10173	18-283	Roubidoux
2517	5540	10868	18-315	Beaver
	5963	10878	23-18	
	6055	11342		
	6189	13846		
		14189	MUNSON	
		14404		
		14639	✓ Longfellow	
		14709		

All above at \$1.25 each, postpaid.

MUNSON	SOUTH DAKOTA	OTHERS		
Captain	Azita	Palmetto	McPike	Isabella
Delago	Chontay	Vermorel	Moyer	Ohio
Delakins	Mandan	Ramsey	Helen Keller	M Reisling
Presley	Nompah	Barnes	Stark's Star	Ericson
R. W. Munson	Shakoka	De Grasset	Cynthiana	Pontiac
Wetumka	Tahama	Rio Colorado	Bachelier	Portland
		Cynthia	Jefferson	Telegraph
		McCoy	Empire State	

These vines at \$0.75 each, postpaid.

The FRENCH-AMERICAN HYBRIDS listed above, for the most part, are wine and juice varieties. LANDOT 244, BURDIN 4503, SEIBEL 10878, and SEYVE-VILLARD 18-315 produce wines of the highest quality. S-V. 23-18 is one of the latest introductions and appears very promising. Among those suitable for the table are SEIBEL 5409, 10076, 14639, 14709; SEYVE-Villard 12-328, 12-358, 12-401 and 14-287. This last number is an extremely early variety, ripening at Hutchinson in early August. Furthermore, it has an exquisite Muscat flavor.

BEAVER is one of the first hybrids or selections of the Missouri State Fruit Experiment Station. Early to ripen, it has medium to small clusters of medium to large berries, black with blue bloom. Skin is thin, fairly tender, flesh fairly crisp, seeds are small and separate easily. One of the most delicious grapes we have ever tasted. Vigor and production medium. ELEVEN POINT has a very large, compound cluster of medium to large round berries. Black with blue bloom. Almost pure vinifera in quality, it is neutral, sweet and very good. The vine is vigorous and productive. Ripens at the Station about September 5th.

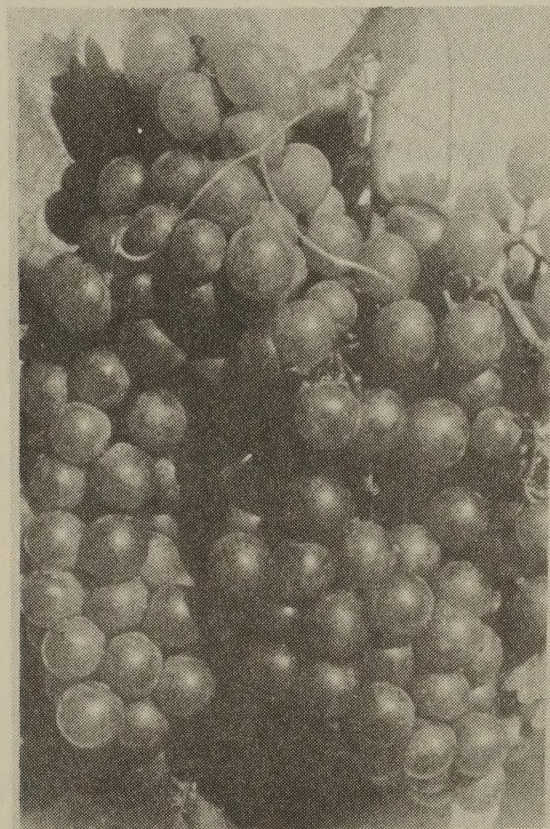
LONGFELLOW has a beautiful long bunch of large berries. The quality is very good. Our only bearing vine is a graft on Rupestris St. George and is very productive.

The SOUTH DAKOTA varieties are extremely hardy and we believe they may be planted much farther north than the usual grape range. Several varieties have fruited for us and we have been favorably impressed with their quality and productiveness.

Most of the OTHERS are varieties which are quite rare. Several appear to offer many interesting possibilities.

COMPLETE VARIETY LIST OF THE SCHROEDER VINEYARD

CUTTINGS CAN BE SUPPLIED OF NEARLY ALL VARIETIES EXCEPT THE numbered varieties of the State Experiment Stations and the USDA. Those marked with (*) are under importation quarantine and cannot be furnished. Orders for cuttings must be in our hands by December 15th. Prices on request.



S-V. 5-276

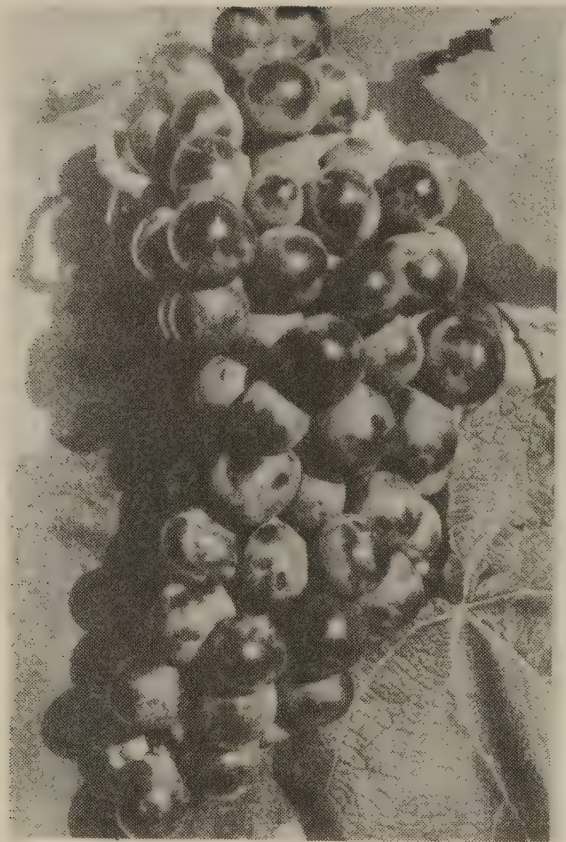
SEYVE-VILLARD

1-72*	12-426*	23-657
3-160*	12-622*	30-56*
5-247*	12-734*	34-211*
5-276	12-789*	
7-111*	12-359*	
10-271*	14-270*	
10-300*	14-281*	
10-347*	14-287	
11-318*	15-151*	
12-129	15-174*	
12-259	15-403	
12-286*	15-505	
12-303	16-207*	
12-309	18-283	
12-327	18-307*	
12-328	18-315	
12-331*	18-402	
12-347	19-159*	
12-358	19-233*	
12-364	19-439*	
12-375	20-347	
12-375R	20-365*	
12-390*	20-366*	
12-391	20-473*	
12-395	23-18	
12-401	23-353*	
12-413	23-410*	
12-417	23-501*	

SEIBEL			BURDIN		LANDOT		GALIBERT
1	6905	11803	4503	5833	204*	3474*	114-3*
2	7053	12583	4515	5894*	234*	3518*	114-6*
14	7056*	13047	4570*	5957*	244	4441*	114-10*
128	7136	13053	4601	5963	301*	4511*	114-12*
1000	7144	13666	4650	6004	304		115-24*
2007	7349	13669	4655	6055	508		122-31*
2056	8239*	13680	4672	6073	790*		127-9*
2653	8357	13694	4687	6189	1674		127-10*
4643	8365	13846	4695	6316	1678*		128-6*
4995	8616	14117	4716	6618*	1680*		128-8*
5163	8718	14189	4727	6664	2281		128-11*
5279	8745	14404	4747*	6685	2282*		128-22*
5296	9110	14483	4795	7051*	2283*		129-1*
5409	10076	14514	4855*	7357*	2291*		133-6*
5437*	10096	14596	5201	7360*	2380*		162-4*
5455	10146	14638	5400	7375*	2416*		217-34*
5760	10173	14639	5406	7380*	2517		221-32*
5813	10417	14654	5535*	7668*	2832*		233-36*
5860	10868	14660	5540	7678*	2860*		255-5*
5898	10878	14664	5580*	9280*	2913*		256-28*
6339	11257*	14665	5581		3108*		261-12*
6468	11342	14709	5620		3381*		261-13*
		15062					

ROOTSTOCKS

MISSOURI EXPERIMENT STATION



Longfellow

NEW YORK EXPERIMENT STATION

Athens	NY	10608	15302
Brocton		11358	15305
Bronx Seedless		11407	15310
Buffalo		11416	15347
Dunkirk		11673	15396
Eden		11724	15402
Fredonia		11927	16413
Goff		11987	16829
Golden Muscat		12128	16998
Hanover		12025	17452
Hector		12236	17925
Interlaken		12666	18046
Seedless		12963	18053
Kendaia		12997	18126
Keuka		13035	18128
Ontario		13050	18149A
Pontiac		13911	19023
Portland		13920	19421
Ripley		14389	19446
Ruby		14519	19457
Schuyler		14528	19501
Seneca		14744	20114
Sheridan		15252	20159
Steuben		15262	20197
Urbana		15291	
Van Buren			
Wayne			
Westfield			
Yates			

OKLAHOMA

OK	2-43
	2-96
	3-36
	9-145
	11-190
	12-85
	14-128
	14-171
	15-15

USDA

(Beltsville)

519-6
519-10
520-2
712-1
810-2
810-45
4017-22
4019-12
4031-6
4032-16
4032-51
4032-52

SOUTH DAKOTA

Azita
Chonkee
Chontay
Eona
Mandan
Oglala
Osbu
Ree
Shakoka
Siposka
Sonona
Tahama
Teopa
Wakpala
Wetonka

USDA

(Woodward)

3895C
6480C
6484C
6487C

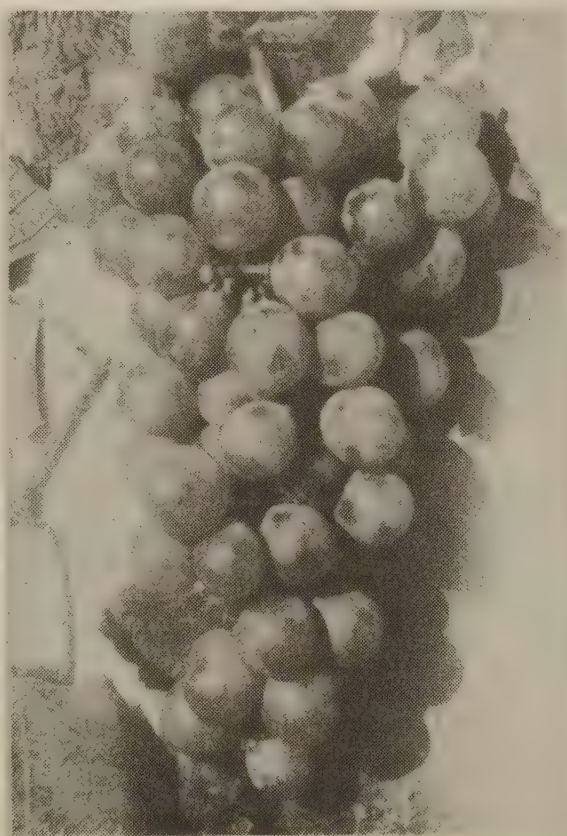
MUNSON HYBRIDS

Albania	Krause
Amerbonte	Ladano
America	Last Rose
Armalaga	Lomanto
Atoka	Longfellow
Augustina	Lukfata
Bailey	Manito
Beacon	Manson
Bell	Marguerite
Ben Hur	Mathilda
Blondin	Mericadel
Brilliant	Minnie
Captivator	Mrs. Munson
Captain	Muench
Carmen	Munson (Jaeger)
Champanel	Neva Munson
Cloeta	Nitodal
Delago	Olito
Delakins	President
Delicatessen	Presley
Delicious	Rommel
Dr. Collier	Ronaldo
Edna	R. W. Munson
Ellen Scott	Sabinal
Elvicand	Valhallah
Extra	Salamander
Fern Munson	Volney
Gold Coin	Wapanuka
Hidalgo	Wetumka
Hopkins	Wine King
Husmann	Xenia
Jaeger	Xinta

MISCELLANEOUS

Adam's	Dutchess	McPike	Thomas (Aest.)
Champagne	Elvira	Minn. 78	Triumph
Alpha	Empire State	Monitor	Virginia
Bacchus	Ericson	Montefiore	Vitis Riparia
Bachelier	Etta	Moonbeam	V. Riparia x
Bachman 4	Gaertner	Moore's Early	(Monticola?)
Barry	Goethe	Mo. Reisling	V. Riparia--
Beta	Green	Moyer	Benton
Blue Jay	Mountain	Mt. Hope	V. Riparia--
Boykin 6A	Hanson	Noah	Wichita
Boykin 20A	Helen Keller	Norton	Warren
Campbell	Herbemont	Ohio	Wilder
Early	Iona	Ozark	Wittle 2
Canada	Isabella	Palmetto	Wittle 45
Catawba	Ives	Paul Revere	Wittle 61
Caywood	Jaeger 43	Peabody	Worden
Christmas	x Norton	Perkins	
Clinton	Jaeger 52	Pierce	VINIFERA
Columbian	Janesville	Pocklington	
Concord	Jefferson	Rupert	Aleatico
Concord	Jerusalem	Red Amber	Alicante Bous.
Seedless	Jessica	Rio Colorado	Aramon
Cynthia	Lenoir	Salem	Blk. Hamburg
Cynthiana	Leverkuhn	Schraidt	Blk. Monukka
Dakota	Lindley	Smith 5	Blauer
Delaware	Little French	Stark's Star	Portugeeser
Diana	Louisiana	Suelter	Cabernet Sauv.
Dunstan 1	Lucida (Rot.)	Taylor	Cardinal
Dunstan 2	Lucile	Telegraph	Chasselas Nap.
Dunstan 4	McAdams	Tetra Delaware	Chenin Blanc
Dunstan 8	McCoy	Tetra Niagara	Colombard

Dattier de	Pinot Noir
Beyrouth	Prune de
Delight	Cazouls
Dumas	Queen of the
Emerald	Vineyard
Reisling	Red Csaba
Emperor	Red Traminer
Gray	Refosco
Reisling	Ribier
Grenache	Rish Baba
Grignolino	Rosaki
Gros Guillaume	Ruby Cabernet
Julius Cezar	San Giovetti
Kahali	Sauvignon
Lignan Blanc	Blanc
Madeline	Sultana
Angevine	Sultanina
Malaga	Sylvaner
Muscat Canelli	Tannat
M. Frontignan	Thomuscat
Muscat Mrs.	Tinta Maderia
John Mathias	Trousseau
Muscat Noir	Zinfandel
Precoce	
Muscat Rouge	
Orsay Oliver	
Pearl de Csaba	
Petite Syrah	
Pineau de	
Chardonnay	



. Golden Muscat

PLANTING

The grape, more than any other fruit, responds to good care, and this begins with planting.

The site, if possible, should be chosen with care. Warm soils are desirable, not too rich, with a reasonable amount of humus and above all, good drainage. Almost all varieties dislike wet feet. A location subject to late spring frosts should be avoided. Generally speaking, the grape is well adapted to most soils, only a few varieties being particular in their requirements.

As most of us want only a few vines for home use, we must get along with what ground we have. Commercial growers will find complete information in the splendid books available, or from their State Experiment Stations.

The land should be well worked and in the best possible physical condition before planting. For the home vineyard the usual spacing is 8 x 8 feet; if power tools are to be used, 10 feet between rows will be much better. Rows should be as long as the plot permits with turning space left at each end. The direction of the row is usually dictated by the contour of the land. In the North, if there may be a choice, a north-south direction will give the vines a little more sun. In areas with a strong prevailing wind during the growing season, it is best to run the rows with the wind.

We prefer planting in the early spring, but it is quite true that fall planting is successful somewhat south of our location.

One year vines are the best to plant, altho some weaker varieties may benefit by spending two years in the nursery. Never buy so-called bearing age vines--you are just throwing your money away. Vines should have good tops and a husky root system, but nothing is gained by planting those with excessive growth. If the vines are dry when received, soak roots overnight in fresh water, then heel in at a convenient spot until ready to plant. When ready to plant, cut the top to a single trunk as straight as possible and leave two buds only. The roots should be trimmed back to not more than a few inches, removing all shorter injured parts. Each hole should be freshly dug, the top and sub-soil being kept separate. Set the plant in the exact spot desired, spread the roots and cover with a spadeful of top soil. Use no manure or fertilizer in the hole. Tramp the soil over the roots, finish filling the hole and tramp down. If the ground is dry, water liberally, at least a gallon to the vine. Then mulch around it with loose soil. Care should be taken that the vine is not set too deep or too shallow. Slightly deeper than it stood in the nursery is about right.

The first season is most important. Absolutely clean cultivation will pay good dividends. While one may grow a cultivated crop between the rows, we feel that the best practice is to use the available food and water for the vine. One may, if desired, place a small stake beside each vine, (if the trellis is not to be erected until the next season), select the strongest shoot and keep it tied as it grows. However, we incline to the method of establishing the trunk the second season, when the root system will be vigorous enough to make a strong straight cane for the purpose.

At the end of the first season's growth, one selects the straightest, sturdiest cane and prunes again to two buds. It appears that nothing has been gained, but that is far from the truth. The vine now has a husky and vigorous root system and will be ready to perform the work demanded of it. This

pruning may be done any time during the dormant period--from the fall of the leaves to the bursting of the buds in the spring.

Many place too much importance on the so called "bleeding" of the vine, which occurs if the vine is pruned after the sap begins moving in the spring. Actually, late pruning may sometimes be very beneficial. The vines can be left until there is no further danger from late frosts or it may even be pruned after the buds at the extremities of the canes have opened. This retards the opening of the others and delays flowering and maturity, which in some instances could be very desirable. Furthermore, tests in France have shown that vines pruned late in the season bear better clusters and more of them. The flow of sap from such pruning wounds is of no consequence.

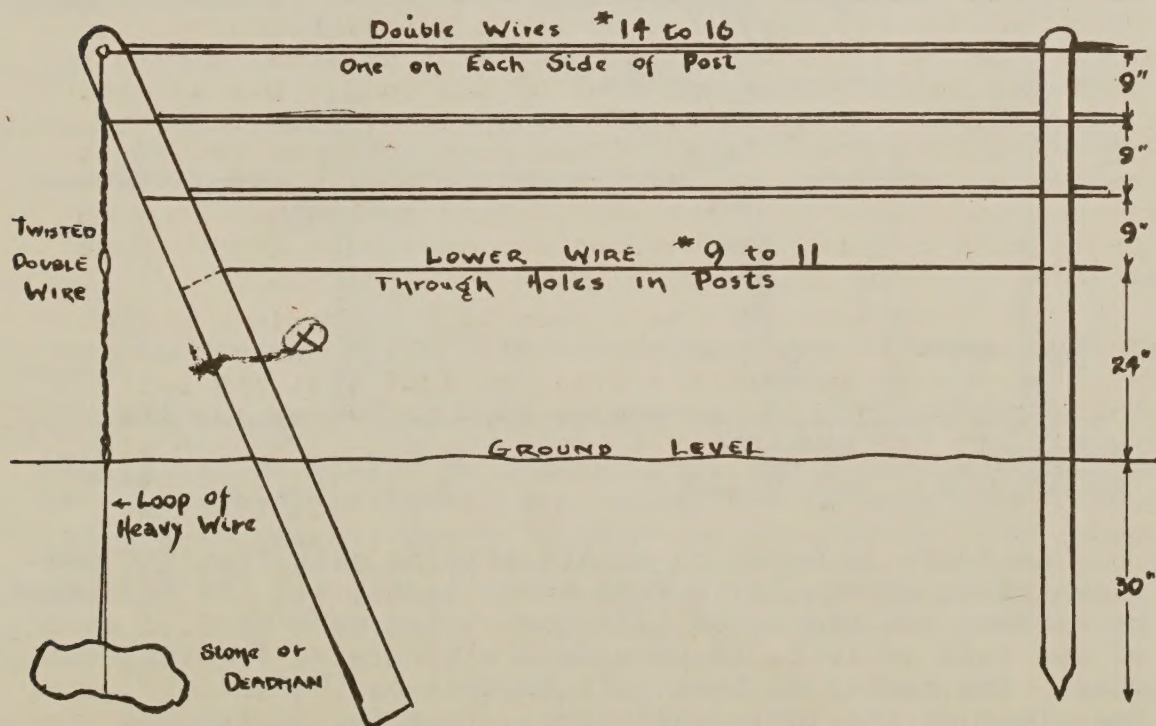
We are now ready for the trellis.

THE TRELLIS

There are several systems of trellising, but those which appeal to us are the two or three wire for the 4-cane Kniffin system, and one which appears especially well adapted to the French-American hybrids, most of which are of more erect growth than our native American hybrids such as Delaware, Concord, etc.

The two (or three) wire system is simply a series of posts, usually standard $6\frac{1}{2}$ ft. fence posts, set $4\frac{1}{2}$ ft. above the ground and placed about every third or fourth vine. End posts are heavier and must be rigidly braced. The wire is either run through holes drilled through the posts (best) or fastened on the windward side with staples. The spacing of the wires vary with location and preference--the lower wire should be at least 24 inches from the ground.

The French trellis offers a few advantages that to our mind are important--the main one being that on spur and cordon trained vines it eliminates the necessity of summer tying. The diagram shows its essential features.



We also like this method of bracing end posts. It is simple, inexpensive, and very rigid.

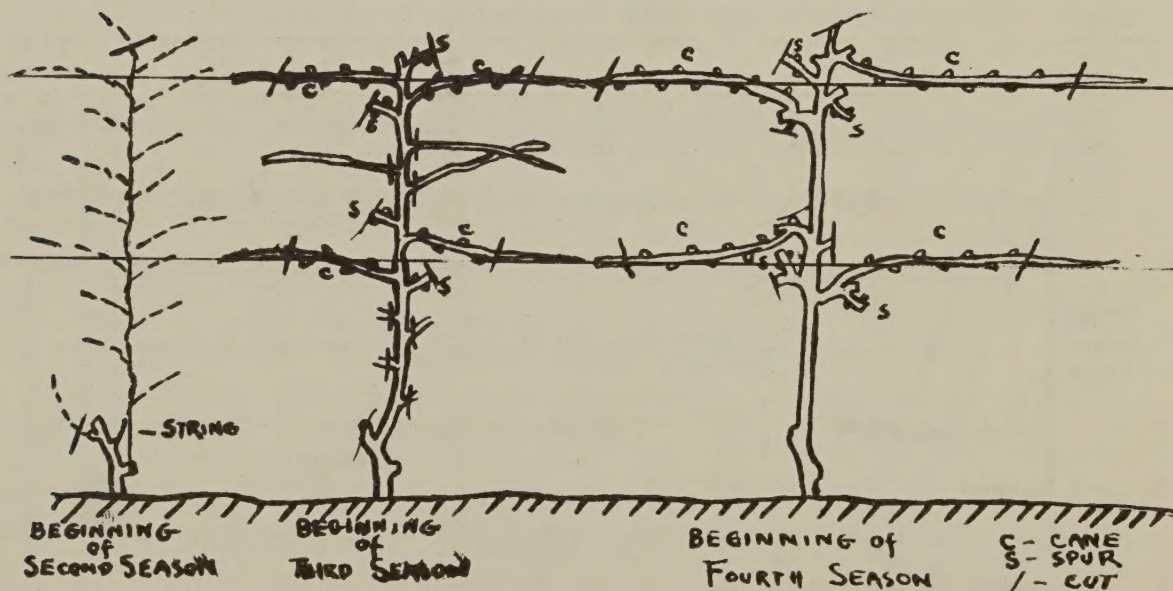
In vines which are spur or horizontal cordon pruned, the entire load of fruit is carried on the lower wire and hangs as shown in the photo on page 3. The shoots are placed between each pair of small wires as they elongate, keeping the foliage in a vertical plane. No summer tying is necessary. Spraying is easy and coverage thorough. As growth continues, the canes hang over the top wires, providing ample shade for the fruit below. The fruit is quickly and easily harvested, without pawing through the entire vine. Furthermore, pruning is simplified, as all canes rise vertically from the vine framework. The slight additional cost for wire is more than repaid by the multiple advantages--among which may also be mentioned the more uniform ripening of the fruit, all hanging at the same distance from the ground.

THE SECOND SEASON

The trellis is now in place and the vine pruned to two buds. It is well to leave a short stub, preferably at right angles to the trunk, to fasten a stout string for training purposes

After growth starts and danger of frost is past, the strongest shoot is selected and twined about the string. All others are removed. A little attention now and then, perhaps two or three times during the season, will keep it growing up the cord. On spur and cordon pruned varieties the shoot is pinched off a couple buds beyond the lower wire--on vines pruned to the 4-cane Kniffin system, a couple buds beyond the top wire. The lateral buds will then force, giving ample material for forming the framework of the three systems we will describe briefly.

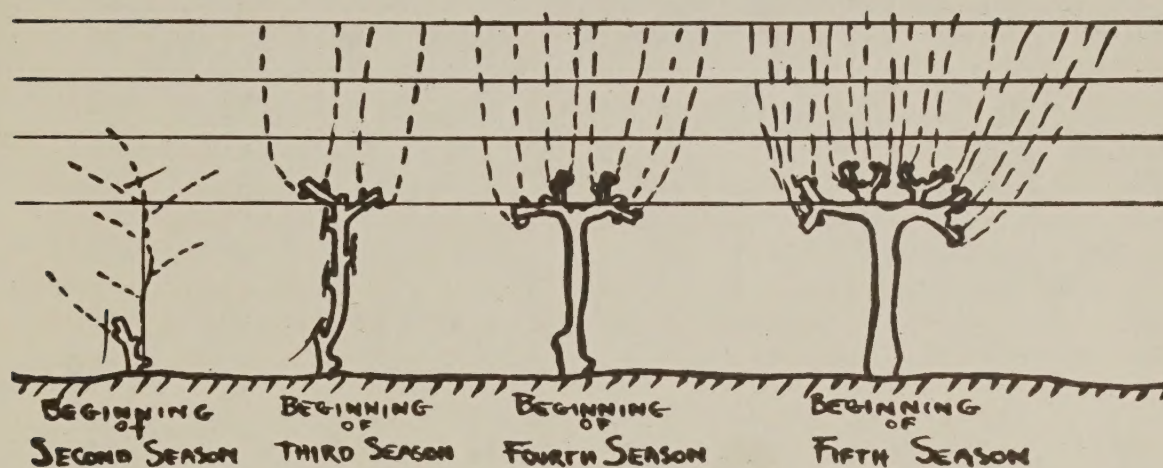
THE 4-CANE KNIFFIN



As fruit is borne on shoots arising only from the previous years growth (with rare exceptions), all old wood must be removed and new canes laid down. For each cane, a spur of two buds is left, to provide fruiting wood for the next year. The number of buds left depends on the variety, age, and vigor of the individual vine. Thus for an average variety in its third season, one would perhaps leave a total of 25 to 40 buds, about 60% on the top wire;;the balance on the

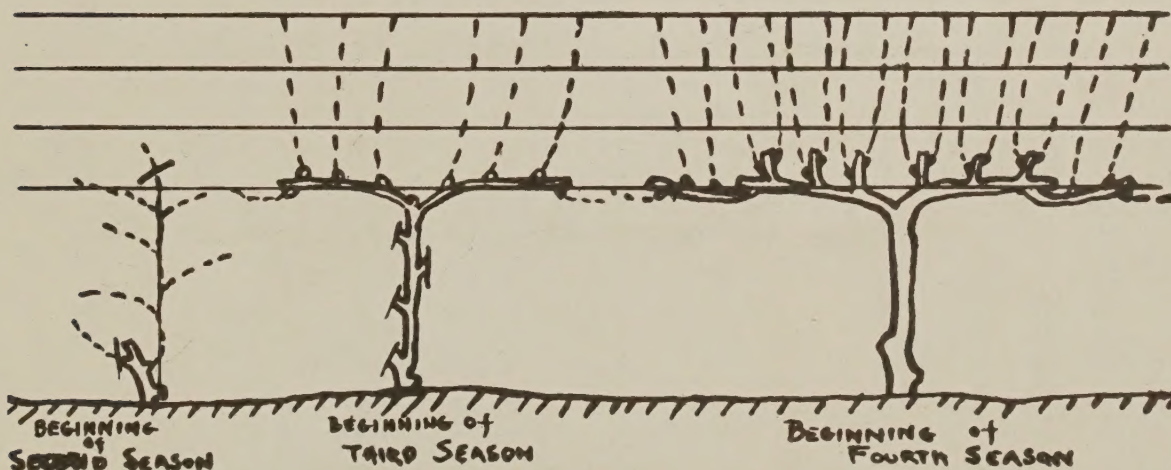
lower. One counts the buds on both spurs and canes. Each year the number of buds may be increased with the vigor of the vine. Each year the canes which produced the fruit are removed and a new pair--cane and spur--are laid down for the next crop. The best way to learn to prune properly is to watch someone who knows what he is doing--10 minutes of that will beat reading all the descriptions in the world.

THE SPUR SYSTEM



One sees that regardless of the training system to be used, the pruning at the beginning and end of the first season are identical. In the spur system, which cannot be used successfully with most American hybrids, the vine is headed at the lower wire and spurs of two buds each are left, two or more, depending on the variety and vigor. As the vine increases in capacity, more are left, until a strong vine may carry a great number of buds.

THE HORIZONTAL CORDON



This may be single or double, that is, a single long arm in one direction; or two shorter arms, one in each direction. The method of establishment is shown in the sketch. One prunes by leaving two new buds on each spur, which are thus gradually extended. If they become too long, the arm is renewed from a cane growing in a suitable location. The double system has an advantage here, as one side may be renewed at a time.

The Spur and Cordon systems are perfectly adapted to most of the French-American hybrids and should be used whenever short pruning is indicated for any variety.

WE SUGGEST

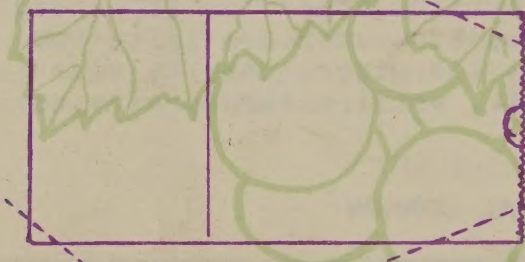
that the interested grower purchase some of the very good books available on the grape--such as "A Wine Grower's Guide" by Philip M. Wagner (3.00); "Grapes and Wines from Home Vineyards" by U. P. Hedrick (4.00). For those interested in wine --we know "American Wines and How to Make Them" by Philip M. Wagner (2.50) and "The Principles and Practice of Wine Making" Cruess (7.50) are the best available. For those interested in the growing, grafting, etc. of vines and other plants, we like "Propagation of Plants" Kains and McQuesten (4.00)

These books may be ordered from THE SCHROEDER VINEYARD, 800 West 17th St., Hutchinson, Kansas, at the above prices, postpaid.

DISEASE AND INSECT CONTROL

The grape is easily protected against the fungus diseases and insects to which they are susceptible. Since local conditions have much effect upon the time of application and strength of solutions, we suggest you write your State Experiment Station or contact your county agent for accurate and up-to-date information.

Birds are another problem for the small grower, especially in urban districts. So far we have found no perfect solution for this menace except to bag the fruit. This is easily done and if performed at the proper time--when the berries are the size of very small peas, it results in the most beautiful and perfect bunches one has ever seen.



Use 3 or 4 lb. grocery bags, cut as shown. Pull over cluster, fold flaps formed by cuts over the cane (not stem of cluster) and staple with a small wire stapler. Or one may use common pins. The small hole in the bottom is for drainage, it is essential.

We have a few copies left of a 14 page mimeographed translation of descriptions of most of the French-American hybrids. Sent postpaid for \$1. We can supply varieties grafted to suitable rootstocks. Order now for next season delivery. Prices on request. State variety desired and preferred stock.

SOME 1949 SUGAR AND ACID NOTES

SEIBEL 5455	22-3/4% sugar	0.96% acid	SV 12-308	15 1/2	0.89
6339	19	.81	12-309	19	1.02
7136	20	1.00	12-364	17 1/2	.90
7349	20	1.22	12-375	21	.96
10096	21	1.22	12-401	18	.52
11803	21 1/2	1.07	12-413	19 1/2	.92
14639	16	1.07	15-403	21 1/2	.95
14660	15 1/2	1.07	23-657	24	1.15
Westfield	19	.86	Grenache	18	.73
G. Muscat	18 1/2	.67	Sylvaner	15 1/2	1.02
Keuka	18 1/2	.98	Beaver	18 1/2	.44
Concord	14 1/2	.44	Eleven Point	13	.83
Seneca	15	.75	Gasconade	16	.65
Ellen Scott	19 1/2	1.19	Mo. 2606	19 1/2	1.30
Captain	14 1/2	.70	Mo. 1274	19	1.02

Some of the unreleased Missouri seedlings are very promising for wine. Most of these are Muench X Prune de Cazouls.